N logical buffers, each logical buffer being associated with only one of the output ports; and

scheduling means for forwarding data blocks associated with a given logical buffer through its corresponding output port when the given logical buffer is full.

*Please amend Claim 46 as follows:*

46. The device according to claim 45, the device further including means for introducing idle data blocks into an output digital data stream replicated by the logical buffer for its corresponding output port when the output transmission rate of its corresponding output port is greater than the input transmission rate.

**IN THE DRAWINGS**

It is requested that the two sheets of drawings containing Figures 1 and 4 respectively be cancelled and replaced with the enclosed substitute sheets, for which duplicates have been submitted to show the proposed drawing changes in red.

* * *

**REMARKS**

**SUMMARY OF OFFICE ACTION AND SUMMARY OF RESPONSE**

In the Office Action, Examiner rejected Claims 1, 2, 4, 6, 8, 10, 11, 13, 14, 16, 18 and 20 under 35 U.S.C. Section 102(b) as being anticipated by U.S. Patent 5,502,749 of Ozaki (herein Ozaki).

Examiner rejected Claims 3, 5, 7, 9, 12, 15, 17, 19 and 21 under 35 U.S.C. Section 103(a) as being unpatentable over Ozaki in view of deemed knowledge, according to the Examiner, of one of ordinary skill in the art.

Examiner rejected Claims 22-43 under 35 U.S.C. Section 103(a) as being unpatentable over U.S. Patent 5,576,873 of Crossland (herein Crossland) in view of Ozaki.

Examiner rejected Claims 44-46 under 35 U.S.C. Section 103(a) as being unpatentable over Ozaki in view of Crossland and in further view of U.S. Patent 5,742,907 of Brown (herein Brown).

In this Response, Applicant amends the specification, and amends Claims 1-46 to address the Examiner's objections, to correct typographical errors and informalities of language.

**IN THE SPECIFICATION**

The paragraph beginning on page 5, line 9 has been amended in line 21 to recite --Interwatch 95000 (trademark) model-- rather than "Interwatch 95000 model" and in line 22 to recite --AX4000 (trademark) model-- rather than "AX4000 model". This amendment identifies phrases that the Applicant believes may be trademarks related to the identified devices.

The paragraph beginning on page 7, line 9 has been amended in line 14 to recite --input port 18-- rather than "serial port 13". This amendment conforms to the specification on page 7, lines 12-14 and Figures 3A and 3B which identify the port as "input port 18" connected to microprocessor 30.

The paragraph beginning on page 7, line 19 has been amended in line 21 to recite --microprocessor 30-- rather than "microprocessor 32". This amendment conforms to the

specification on page 7, lines 12-14 and Figures 3A and 3B which identify the microprocessor having reference number "30".

The paragraph beginning on page 9, line 23 has been amended in line 25 to recite --output ports 28-- rather than "output ports 18". This amendment conforms to the specification on page 6, line 10; page 6, line 26; page 7, line 16; page 7, line 26; page 8, line 17; page 8, line 19; page 8, line 23; and page 9, line 5 which identify output ports having reference number "28".

**IN THE CLAIMS**

*Claim 1*

Applicant amends Claim 1 in lines 2 and 6 to recite --communication device-- rather than "communications device". This conforms to the specification which refers to a "communication device". See, for example, page 1, lines 2 and lines 9.

Applicant amends Claim 1 in line 3 to recite --a reference digital traffic pattern-- rather than "a reference pattern defining the digital traffic". This amendment clarifies Claim 1.

Applicant amends Claim 1 in line 4 to recite --reference digital traffic pattern-- rather than "reference pattern" to provide proper antecedent basis.

Applicant amends Claim 1 in line 7 to recite --plurality of traffic streams-- rather than "plural traffic streams" to provide proper antecedent basis.

Applicant amends Claim 1 in line 6 to recite --to mimic real digital traffic input conditions for the communication device--. This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

*Claim 2*

Applicant amends Claim 2 in line 2 to recite --a plurality of phase delays-- rather than "respective phase delays". Claim 2 has also been amended in line 2 to recite --amongst the plurality of traffic streams-- rather than "between said plural traffic streams". These amendments clarify Claim 2 and provide proper antecedent basis.

*Claim 3*

Applicant amends Claim 3 in line 1 to recite --communication device-- rather than "communications device". This conforms to the specification which refers to a "communication device". See, for example, page 1, lines 2 and lines 9.

Applicant amends Claim 3 in line 2 to recite --statistical multiplexing amongst the plurality of traffic streams-- rather than "statistical multiplexing". This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

*Claim 4*

Applicant amends Claim 4 in line 1 to recite --plurality of traffic streams-- rather than "plural traffic streams" to provide proper antecedent basis.

*Claim 5*

Applicant amends Claim 5 in line 1 to recite --plurality of traffic streams-- rather than "plural traffic streams" to provide proper antecedent basis.

*Claim 6*

Applicant amends Claim 6 in line 1 to recite --communication device-- rather than "communications device". This conforms to the specification which refers to a "communication device". See, for example, page 1, lines 2 and lines 9.

Applicant amends Claim 6 in line 3 to recite --a digital traffic pattern-- rather than "the digital traffic". This amendment clarifies Claim 6.

Applicant amends Claim 6 in lines 4-5 to recite --providing a plurality of streams of the digital traffic pattern to input ports of the communication device, the plurality of streams having a plurality of phase delays therebetween-- rather than "providing plural streams of the generated digital traffic to respective input ports of the communications device with phase delays". This amendment clarifies Claim 6.

*Claim 7*

Applicant amends Claim 7 in line 1 to recite --communication device-- rather than "communications device". This conforms to the specification which refers to a "communication device". See, for example, page 1, lines 2 and lines 9.

Applicant amends Claim 7 in line 2 to recite --statistical multiplexing of the pluraltiy of streams-- rather than "statistical multiplexing". This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

*Claim 8*

Applicant amends Claim 8 in lines 1 and 5 to recite --communication device-- rather than "communications device". This conforms to the specification which refers to a "communication device". See, for example, page 1, lines 2 and lines 9.

Applicant amends Claim 8 in line 3 to recite --a plurality of digital traffic streams having identical data content-- rather than "a plurality of identical digital traffic streams". This amendment clarifies Claim 8.

Applicant amends Claim 8 in line 4 to recite --plurality of digital traffic streams-- rather than "identical streams" to provide proper antecedent basis.

Applicant amends Claim 8 in line 4 to recite --a plurality of phase delays therebetween to input ports-- rather than "phase delays to respective input ports". This amendment clarifies Claim 8.

*Claim 9*

Applicant amends Claim 9 in line 1 to recite --communication device-- rather than "communications device" to provide proper antecedent basis.

Applicant amends Claim 9 in line 2 to recite --statistical multiplexing of the plurality of digital traffic streams-- rather than "statistical multiplexing". This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

*Claim 10*

Applicant amends Claim 10 in line 1 to recite --for use in testing a multi-port communication device--. This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

Applicant amends Claim 10 in line 3 to recite --an input digital traffic stream-- rather than "a digital traffic stream". This amendment clarifies Claim 10.

Applicant amends Claim 10 in lines 4-5 to recite --generating a plurality of output digital traffic streams from the input digital traffic stream, wherein a phase delay is introduced to at least one of the plurality of output digital traffic streams-- rather than "generating a plurality of output digital traffic streams from the received digital traffic, wherein the output streams include respective phase delays". This amendment clarifies Claim 10.

*Claim 11*

Applicant amends Claim 11 in line 1 to recite --plurality of output digital traffic streams-- rather than "the output streams" to provide proper antecedent basis.

Applicant amends Claim 11 in line 2 to recite --input digital traffic stream-- rather than "received digital traffic stream" to provide proper antecedent basis.

*Claim 12*

Applicant amends Claim 12 in line 1 to recite --communication device-- rather than "communications device" to provide proper antecedent basis.

Applicant amends Claim 12 in line 2 to recite --statistical multiplexing of the plurality of output digital traffic streams-- rather than "statistical multiplexing". This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

*Claim 13*

Applicant amends Claim 13 in lines 2 and 6 to recite --communication device-- rather than "communications device". This conforms to the specification which refers to a "communication device". See, for example, page 1, lines 2 and lines 9.

Applicant amends Claim 13 in line 3 to recite --a reference pattern generator generating -- rather than "means for generating". This amendment conforms to the specification on page 5, lines 9-22 which refers to a "generator 12".

Applicant amends Claim 13 in line 3 to recite --a reference pattern defining a digital traffic pattern-- rather than "a reference pattern defining the digital traffic". This amendment clarifies Claim 13.

Applicant amends Claim 13 in line 4 to recite --a traffic stream replicating device generating-- rather than "means for generating". This amendment conforms to the specification on page 5, lines 24-27 and page 6, lines 1-3 which refers to a "cell stream replicating device 10".

Applicant amends Claim 13 in line 4 to recite --plurality of traffic streams-- rather than "plural traffic streams" to provide proper antecedent basis.

Applicant amends Claim 13 in line 4 to recite --load-- rather than "are used for loading". This amendment clarifies Claim 13.

Applicant amends Claim 13 in lines 5-6 to recite --to mimic real digital traffic input conditions for the communication device--. This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

*Claim 14*

Applicant amends Claim 14 in line 2 to recite --amongst the plurality of traffic streams-- rather than "between said plural traffic streams". This amendment clarifies Claim 14 and provides proper antecedent basis.

*Claim 15*

Applicant amends Claim 15 in line 1 to recite --communication device-- rather than "communications device" to provide proper antecedent basis.

Applicant amends Claim 15 in line 2 to recite --statistical multiplexing of the plurality of traffic streams-- rather than "statistical multiplexing". This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

*Claim 16*

Applicant amends Claim 16 in line 1 to recite --the plurality of traffic streams-- rather than "plural traffic streams" to provide proper antecedent basis.

*Claim 17*

Applicant amends Claim 17 in line 1 to recite --the plurality of traffic streams-- rather than "plural traffic streams" to provide proper antecedent basis.

*Claim 18*

Applicant amends Claim 18 in line 1 to recite --communication device-- rather than "communications device". This conforms to the specification which refers to a "communication device". See, for example, page 1, lines 2 and lines 9.

Applicant amends Claim 18 in line 3 to recite --a traffic generator generating -- rather than "means for generating". This amendment conforms to the specification on page 5, lines 9-22 which refers to a "generator 12".

Applicant amends Claim 18 in line 3 to recite --input digital traffic-- rather than "the digital traffic" to provide proper antecedent basis.

Applicant amends Claim 18 in lines 4-5 to recite --providing a plurality of streams of the input digital traffic to input ports of the communication device, the plurality of streams provided with phase delays therebetween to mimic real digital traffic input conditions for the communication device-- rather than "providing plural streams of the generated digital traffic to respective input ports of the communications device with phase delays". This amendment clarifies Claim 18.

*Claim 19*

Applicant amends Claim 19 in line 1 to recite --communication device-- rather than "communications device" to provide proper antecedent basis.

Applicant amends Claim 19 in line 2 to recite --statistical multiplexing of the plurality of streams-- rather than "statistical multiplexing". This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

*Claim 20*

Applicant amends Claim 20 in line 1 to recite --communication device-- rather than "communications device". This conforms to the specification which refers to a "communication device". See, for example, page 1, lines 2 and lines 9.

Applicant amends Claim 20 in line 3 to recite --a plurality of digital traffic streams having identical data content-- rather than "a plurality of identical digital traffic streams". This amendment clarifies Claim 20.

Applicant amends Claim 20 in lines 4-5 to recite --providing the plurality of digital traffic streams to input ports of the communication device with a phase delay introduced to at least one of the plurality of digital traffic streams to mimic real digital traffic input conditions for the communication device-- rather than "providing the identical streams to respective input ports of the communications device with phase delays". This amendment clarifies Claim 20.

*Claim 21*

Applicant amends Claim 21 in line 1 to recite --communication device-- rather than "communications device" to provide proper antecedent basis.

Applicant amends Claim 21 in line 2 to recite --statistical multiplexing of the plurality of digital traffic streams-- rather than "statistical multiplexing". This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

*Claim 22*

Applicant amends Claim 22 in line 2 to recite --an input continuous digital data stream comprising input data blocks-- rather than "an input continuous digital data stream" to provide proper antecedent basis.

Applicant amends Claim 22 in line 4 to recite -- input continuous digital data stream -- rather than "input digital data stream" to provide proper antecedent basis.

Applicant amends Claim 22 in line 4 to recite --into N streams of replicated continuous digital data streams-- rather than "N times". This amendment clarifies Claim 22.

Applicant amends Claim 22 in line 5-6 to recite --transmitting the plurality of replicated continuous digital data streams at output transmission rates, each output transmission rate-- rather than "transmitting each such replicated digital data stream through a separate output port at an output transmission rate". This amendment clarifies Claim 22 and provides proper antecedent basis.

Applicant amends Claim 22 in line 8 to recite --a delay-- rather than "a relative delay". This amendment clarifies Claim 22.

Applicant amends Claim 22 in lines 8-9 to recite --each replicated continuous digital data stream of the plurality of replicated digital data streams-- rather than "each said output digital data stream" to provide proper antecedent basis.

Applicant amends Claim 22 in line 9 to recite --the input continuous digital data stream-- rather than "the input digital data stream" to provide proper antecedent basis.

Applicant amends Claim 22 in line 9 to recite --to mimic real digital traffic input conditions for the communication device--. This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

*Claim 23*

Applicant amends Claim 23 in line 1 to recite --the device further--. This amendment clarifies Claim 23.

Applicant amends Claim 23 in line 2 to recite --a replicated continuous digital data stream of the plurality of replicated continuous digital data streams-- rather than "the output digital data stream" to provide proper antecedent basis.

Applicant amends Claim 23 in line 2 to recite --for transmission through an output port of the N output ports--. This amendment clarifies Claim 23.

Applicant amends Claim 23 in lines 2-3 to recite --an output transmission rate associated with the output port-- rather than "the output transmission rate of the corresponding output port". This amendment clarifies Claim 23.

*Claim 24*

Applicant amends Claim 24 in line 2 to recite --a memory having N first-in first-out (FIFO) logical buffers-- rather than "a memory and N first-in first-out logical buffers". This amendment clarifies Claim 24.

Applicant amends Claim 24 in line 3 to recite --one digital data stream of the plurality of replicated continuous digital data streams-- rather than "a separate replicated digital data stream" to provide proper antecedent basis.

Applicant amends Claim 24 in line 3 to recite --when a logical buffer of the N FIFO logical buffers is full, data blocks associated with the logical buffer are forwarded to an output port of the N output ports associated the logical buffer, such that a delay provided to a digital

data stream transmitted through the output port correlates to a length of the logical buffer-- rather than "data blocks associated with each logical buffer are forwarded to the corresponding output port only when the logical buffer is full such that the relative delay encountered by the replicated cell stream corresponds to the length of the logical buffer". This amendment clarifies Claim 24.

*Claim 25*

Applicant amends Claim 25 in line 2 to recite --a memory having N first-in first-out (FIFO) logical buffers-- rather than "a memory and N first-in first-out logical buffers". This amendment clarifies Claim 25.

Applicant amends Claim 25 in line 3 to recite --one digital data stream of the plurality of replicated continuous digital data streams-- rather than "a separate replicated digital data stream" to provide proper antecedent basis.

Applicant amends Claim 25 in line 3 to recite --when a logical buffer of the N FIFO logical buffers is full, data blocks associated with the logical buffer are forwarded to an output port of the N output ports associated the logical buffer, such that a delay provided to a digital data stream transmitted through the output port correlates to a length of the logical buffer-- rather than "data blocks associated with each logical buffer are forwarded to the corresponding output port only when the logical buffer is full such that the relative delay encountered by the replicated cell stream corresponds to the length of the logical buffer". This amendment clarifies Claim 25.

*Claim 26*

Applicant amends Claim 26 in line 2 to recite --each replicated continuous output digital data stream-- rather than "each replicated output digital data stream" to provide proper antecedent basis.

Applicant amends Claim 26 in line 2 to recite --forwards data blocks associated with its logical buffer at the output transmission rate-- rather than "comprises the output transmission rate". This amendment clarifies Claim 26.

Applicant amends Claim 26 in line 3 to recite --the delay provided to the replicated continuous digital data stream correlates to a transmission rate of the corresponding output port-- rather than "the relative delay encountered by the replicated digital data stream corresponds to the transmission rate of the corresponding output port". This amendment clarifies Claim 26.

*Claim 27*

Applicant amends Claim 27 in line 1 to recite --each of the logical buffers is established-- rather than "logical buffers are established" to provide proper antecedent basis.

Applicant amends Claim 27 in line 2 to recite --the input data blocks-- rather than "each input data block" to provide proper antecedent basis.

Applicant amends Claim 27 in line 2 to recite --into a physical buffer organized in the memory, each of the logical buffers corresponding to a different physical buffer-- rather than "into different physical buffers organized in the memory". This amendment clarifies Claim 27.

*Claim 28*

Applicant amends Claim 28 in line 1 to recite --each of the logical buffers is established-- rather than "logical buffers are established" to provide proper antecedent basis.

Applicant amends Claim 28 in line 2 to recite --the input data blocks-- rather than "each input data block" to provide proper antecedent basis.

Applicant amends Claim 28 in line 2 to recite --into a physical buffer organized in the memory, each of the logical buffers corresponding to a different physical buffer-- rather than "into different physical buffers organized in the memory". This amendment clarifies Claim 28.

*Claim 29*

Applicant amends Claim 29 in line 1 to recite --the logical buffers-- rather than "logical buffers" to provide proper antecedent basis.

*Claim 30*

Applicant amends Claim 30 in line 1 to recite --the logical buffers-- rather than "logical buffers" to provide proper antecedent basis.

*Claim 31*

Applicant amends Claim 31 in line 1 to recite --transmitted digital data streams-- rather than "output digital data streams" to provide proper antecedent basis.

*Claim 32*

Applicant amends Claim 32 in line 1 to recite --transmitted digital data streams-- rather than "output digital data streams" to provide proper antecedent basis.

*Claim 33*

Applicant amends Claim 33 in line 1 to recite --for mimicking real data traffic input patterns--. This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

Applicant amends Claim 33 in line 2 to recite --a continuous digital data stream comprising input data blocks-- rather than "a continuous digital data stream" to provide proper antecedent basis.

Applicant amends Claim 33 in line 8 to recite --for establishing N first-in first-out logical buffers in the memory-- rather than "for establishing N first-in first-out logical buffers". This amendment clarifies Claim 33.

Applicant amends Claim 33 in lines 8-9 to recite --each of the input data blocks of the continuous digital data stream-- rather than "each data block of the input digital data stream" to provide proper antecedent basis.

Applicant amends Claim 33 in line 12 to recite --its corresponding output port-- rather than "the corresponding output port". This amendment clarifies Claim 33.

*Claim 34*

Applicant amends Claim 34 in line 1 to recite --each logical buffer has a length-- rather than "the length of each logical buffer". This amendment clarifies Claim 34.

Applicant amends Claim 34 in lines 2-3 to recite --an output digital data stream replicated by the logical buffer for its corresponding output port-- rather than "the corresponding replicated digital data stream generated at the corresponding output port". This amendment clarifies Claim 34.

*Claim 35*

Applicant amends Claim 35 in lines 1-2 to recite --each of the logical buffers is established-- rather than "the logical buffers are established". This amendment clarifies Claim 35.

Applicant amends Claim 35 in line 2 to recite --copying the input data blocks into a physical buffer organized in the memory, each of the logical buffers corresponding to a different physical buffer-- rather than "copying each input data block into different physical buffers organized in the memory". This amendment clarifies Claim 35 and provides proper antecedent basis.

*Claim 36*

Applicant amends Claim 36 in line 2 to recite --input data block-- rather than "input cell" to provide proper antecedent basis.

*Claim 38*

Applicant amends Claim 38 in line 1 to recite --for mimicking real data traffic input patterns--. This amendment conforms to the specification on page 6, lines 26-27 and page 7, lines 1-4.

Applicant amends Claim 38 in line 2 to recite --a continuous digital data stream comprising input data blocks-- rather than "a continuous digital data stream" to provide proper antecedent basis.

Applicant amends Claim 38 in line 8 to recite --for establishing N first-in first-out logical buffers in the memory-- rather than "for establishing N first-in first-out logical buffers". This amendment clarifies Claim 38.

Applicant amends Claim 38 in lines 8-9 to recite --each of the input data blocks of the continuous digital data stream-- rather than "each data block of the input digital data stream" to provide proper antecedent basis.

Applicant amends Claim 38 in line 12 to recite --its corresponding output port-- rather than "the corresponding output port". This amendment clarifies Claim 38.

*Claim 39*

Applicant amends Claim 39 in line 1 to recite --the device further including-- rather than "including". This amendment clarifies Claim 39.

Applicant amends Claim 39 in line 2 to recite --an output digital data stream replicated by the logical buffer for its corresponding output port-- rather than "the output digital data stream". This amendment clarifies Claim 39 and provides proper antecedent basis.

Applicant amends Claim 39 in lines 2-3 to recite --its corresponding output port-- rather than "the corresponding output port". This amendment clarifies Claim 39.

*Claim 40*

Applicant amends Claim 40 in line 1 to recite --for each logical buffer, its length-- rather than "the length of each logical buffer". This amendment clarifies Claim 40.

Applicant amends Claim 40 in line 2 to recite --its corresponding output port-- rather than "the corresponding output port". This amendment clarifies Claim 40.

Applicant amends Claim 40 in lines 3-4 to recite --an output digital data stream replicated by the logical buffer for its corresponding output port-- rather than "the corresponding replicated digital data stream generated at the corresponding output port". This amendment clarifies Claim 40 and provides proper antecedent basis.

*Claim 41*

Applicant amends Claim 41 in lines 1-2 to recite --each of the logical buffers is established-- rather than "the logical buffers are established". This amendment clarifies Claim 41.

Applicant amends Claim 41 in line 2 to recite --copying the input data blocks into a physical buffer organized in the memory, each of the logical buffers corresponding to a different physical buffer-- rather than "copying each input data block into different physical buffers organized in the memory". This amendment clarifies Claim 41 and provides proper antecedent basis.

*Claim 42*

Applicant amends Claim 42 in line 2 to recite --input data block-- rather than "input cell" to provide proper antecedent basis.

*Claim 44*

Applicant amends Claim 44 in lines 9-10 to recite --transmitted digital data stream-- rather than "output digital data stream" to provide proper antecedent basis.

*Claim 45*

Applicant amends Claim 45 in line 3 to recite --a continuous digital data stream comprising input data blocks-- rather than "a continuous digital data stream" to provide proper antecedent basis.

Applicant amends Claim 45 in lines 9-10 to recite --each of the input data blocks of the continuous digital data stream-- rather than "each data block of the input digital data stream" to provide proper antecedent basis.

Applicant amends Claim 45 in line 12 to recite --its corresponding output port-- rather than "the corresponding output port". This amendment clarifies Claim 45.

*Claim 46*

Applicant amends Claim 46 in line 1 to recite --the device further including-- rather than "including". This amendment clarifies Claim 46.

Applicant amends Claim 46 in line 2 to recite --an output digital data stream replicated by the logical buffer for its corresponding output port-- rather than "the output digital data stream". This amendment clarifies Claim 46 and provides proper antecedent basis.

Applicant amends Claim 46 in lines 2-3 to recite --its corresponding output port-- rather than "the corresponding output port". This amendment clarifies Claim 46.

Applicant's invention relates to a system and method of generating digital traffic for use in testing a multi-port communication device. For the method, it includes the steps of generating a reference pattern defining the digital traffic and generating traffic streams from the reference pattern, whereby the traffic streams are used for loading respective input ports of the communication device and an apparatus and device employing the method. The traffic streams mimic real data traffic input patterns which may be present at a communication device. Further features of the invention include the use of logical buffers and data blocks provided to the logical buffers to implement a delay for a particular output traffic stream. Families of claims embodying systems of the invention are also provided.

Applicant has made various amendments in claims 1-46 to clarify antecedents and correct typographical errors. Further amendments have been made to more clearly associate the ambit of the claims with a testing method and a testing system for a communication device.

Applicant's invention is novel and not obvious in view of Ozaki. Applicant submits that Ozaki does not teach a system which anticipates or renders obvious Applicant's invention for at least the following reasons. Ozaki teaches an apparatus which receives and processes radio signals. Received radio signals are shifted in phase by a frequency offset to detect correlation values associated with the radio signals. See in Ozaki, the abstract, Figure 4 and column 6 at line 63 to column 7 at line 21. Ozaki does not relate to testing equipment, does not teach providing a phase or relative delay to a digital signal and does not teach generating streams of data traffic for a series of input ports of a communication device as claimed in Applicant's invention. Accordingly, Examiner's rejections of Claims 1, 2, 4, 6, 8, 10, 11, 13, 14, 16, 18 and 20 under 35 U.S.C. Section 102(b) are traversed.

The Examiner rejected Claims 3, 5, 7, 9, 12, 15, 17, 19 and 21 under 35 U.S.C. Section 103(a) as being obvious over Ozaki in view of knowledge deemed by the Examiner to be held by one of ordinary skill in the art. Applicant traverses the rejection based on at least the following reasons. As noted above, Ozaki teaches an apparatus which receives and processes radio signals, which is clearly outside the field of testing equipment for digital communication systems. Applicant submits that there is no motivation, teaching or suggestion in Ozaki to utilize such deemed knowledge which would thereby render the rejected claims obvious.

Further, Applicant respectfully submits that the Examiner did not provide necessary objective evidence of any teaching, motivation or suggestion for combining Ozaki with any such deemed knowledge to enable an application of Section 103(a), as cited. In asserting U.S.C. 103(a), Applicant submits that the Examiner is required to provide such evidence. *In re Lee*, 61 USPQ2d 1430 (CA FC 2002) states that "[w]hen patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness". *In re Lee*, *supra*, also states that the rationale for combining references "must be based on objective evidence of record" and cannot be "resolved on subjective belief and unknown authority". See pages 1433 and 1434. Further, Section 2142 of the *Manual of Patent Examining Procedure* ("*MPEP*") sets out that the motivation to combine references needs to be explicitly provided. Also, Section 2141 of *MPEP* states that the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination adhered to when applying 35 U.S.C. 103. The Examiner must therefore produce "objective evidence of record" from the prior art showing motivation to combine these references and the reasonable expectation of success from such combination. As

noted earlier, in asserting U.S.C. 103(a), Applicant submits that the Examiner is required to provide such evidence. As Ozaki is not relevant to the field of the invention and as no basis has been provided by Examiner in combining Ozaki with any deemed knowledge of one of ordinary skill in the relevant art, Applicant traverses rejection of Claims 3, 5, 7, 9, 12, 15, 17, 19 and 21 under 35 U.S.C. Section 103(a).

In paragraph 5 of the Office Action, Examiner rejected Claims 22-43 under 35 U.S.C. Section 103(a) as being unpatentable over Crossland in view of Ozaki; however, in her following explanation, Examiner noted only Crossland and Brown. Accordingly, Applicant presumes that claims 22-43 were rejected on the basis of being considered unpatentable over Crossland in view of Brown. Regardless, Applicant submits that claims 22-43 are novel and not obvious in view of Ozaki, Crossland and Brown for at least the following reasons. Neither Ozaki nor Crossland is directed to a testing device and method providing replicated and delayed digital traffic to multiple input ports of a communication device. Crossland simply teaches a telecommunication switch architecture and switching method of replicating incoming data from an input-switch port to many output switch ports. Further, Brown simply teaches a method of maintaining simulcast system synchronization in the event of GPS failure in a radio frequency simulcasting system.

The Examiner has not identified any motivation or suggestion indicating that Crossland, which deals with ATM data, should be combined with either Brown or Ozaki, which both deal with transmissions radio signals. However, even if this were the case, combining Crossland with any of (i) Brown, (ii) Ozaki or (iii) both Brown and Ozaki does not in any way provide the invention as now recited in amended Claims 22-43, as Brown does not teach or suggest delaying streams of digital data but instead teaches delaying radio signals to correct random time delay skew in the event of a GPS failure. Additionally, neither Crossland, Ozaki nor Brown teach or

suggest forwarding data blocks associated with a given logical buffer through its corresponding output port when the given logical buffer is full. Therefore, combining Crossland with either (i) Brown; (ii) Ozaki; or (iii) both Brown and Ozaki, does not teach the recited invention and it is respectfully submitted that the Examiner's rejections of Claims 22-43 are therefore overcome.

The Examiner rejected Claims 44-46 under 35 U.S.C. Section 103(a) as being unpatentable over Ozaki in view of Crossland and in further view of Brown. Similar to the argument provided for the rejection to claims 22-43, above Applicant respectfully submits that the Examiner has provided no objective evidence of any teaching, motivation or suggestion for combining Crossland, Brown and Ozaki. Additionally, Ozaki and Brown do not teach any method or apparatus dealing with a digital data stream but instead deal with radio signals. Therefore, there is no motivation to combine Crossland with either of Brown or Ozaki. However, even if this were the case, combining Crossland and Brown with Ozaki does not in any way provide the invention as now recited in Claims 44-46, as Ozaki and Brown teach correction of radio signals while Crossland teaches a telecommunication switch architecture and switching method. Ozaki, Brown and Crossland do not teach or suggest a performance testing device. Therefore, it is respectfully submitted that the Examiner's rejections of Claims 44-46 are traversed.

**IN THE DRAWINGS**

Figure 1 is amended to show reference number --18-- rather than reference number "28" for the object along the input cell stream (line 16). This amendment conforms to the specification on page 5, lines 24-26 which recites that "input port 18" receives cell stream 54 at input to cell stream replicating device 10 on line 16.

Figure 4 is amended to show reference number --58'-- rather than reference number "58" for the cell stream at bandwidth (c). This amendment conforms to the specification on page 9, lines 14-21 which recites the reference number of the cell stream containing idle cell 62 as "replicated output cell stream 58'".

* * *

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached pages are captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

No new matter has been added by way of this amendment. All claim amendments have been made to clarify antecedents and correct typographical errors except to more clearly associate the ambit of the claims with a testing method and a testing system for a communication device as specifically noted herein. All other claim amendments not specifically dealt with are to correct typographical errors and form of the claims.

By way of the present amendment, this application is believed to be in condition for allowance and such action in due course is earnestly solicited. The Examiner is invited to contact the undersigned by telephone to discuss this case further, if necessary.

Respectfully submitted,

August 13, 2002
Date

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

| | |
|---|---|
| **In re. Application of:** | **McBRIDE, Brian E.** |
| **Serial No.:** | **09/261,197** |
| **Filed:** | **March 3, 1999** |
| **Title:** | **CELL STREAM REPLICATING DEVICE** |
| **Examiner:** | **STEVENS, Roberta A.** |
| **Art Unit:** | **2665** |
| **Confirmation Number:** | **7444** |
| **Atty's Docket No.:** | **53921/56** |

**IN THE SPECIFICATION:**

*The paragraph beginning on page 5, line 9 has been amended as follows:*

The functional block diagram of Figure 1 illustrates a cell stream replicating device 10 according to the preferred embodiment which is connected between an ATM traffic generator 12 and a multiple input port ATM data communication device 14, such as an ATM cell switching device. The ATM traffic generator 12 produces an ATM cell stream, such as shown at ref. no. 54 in Figure 2, on physical interface/line 16 (Figure 1). The cell stream 54 carries a traffic pattern used for testing purposes such as performance testing. As noted from Figure 2, the ATM cell stream 54 is "continuous" in the sense that even if there is no user information or data payload being carried by the cell stream at any given point in time (i.e. other than the ATM control information encapsulated in the cell header which is required for the functioning of the cell stream itself), the ATM traffic generator 12 generates idle or unassigned ATM cells 53 as known in the art, such that there are no gaps or discontinuities in the cell stream. Test generator 12 is commercially available from a variety of sources, including the Interwatch 95000 (trademark) model by GN Nettest and the AX4000 (trademark) model Adtech.

*The paragraph beginning on page 7, line 9 has been amended as follows:*

Figure 3A is a system block diagram illustrating a first system for carrying out the preferred embodiment in practice. In this system, the cell stream replicating device 10 comprises a microprocessor 30 and an associated memory 32 which may be internal to (e.g., a high speed cache memory) or external of the microprocessor 30. The ~~serial~~ input port ~~13~~ 18 is a serial port which converts a bit stream into corresponding word data readable by the microprocessor 30. The input port 18 is connected to the microprocessor 30 via an interrupt signal 34. The microprocessor is also connected to output ports 28 through various means well known in the art. In this case, the output ports 28 are serial ports which convert word data provided by the microprocessor 30 into a serial bit stream.

*The paragraph beginning on page 7, line 19 has been amended as follows:*

In the illustrated embodiment, memory 32 is organized into N physical FIFO buffers 27 such that each logical buffer 26 corresponds to one of the physical buffers 27. The microprocessor ~~32~~ 30 implements the broadcast means 20, a portion of the delay means 24, and the scheduling means 25 by executing a program which, upon receipt of a new cell from the input port 18, copies the new cell to each physical buffer 27. The program also determines when any of the physical buffers 27 are full, and, for those buffers which are full, forwards the lead cells stored therein to the corresponding output ports 28. A housekeeping function of the program maintains each physical buffer by discarding cells which have been transmitted. For example, the physical buffers 27 may be constructed as linked lists, the lead elements of which are discarded when the data is forwarded to the output ports 28.

*The paragraph beginning on page 9, line 23 has been amended as follows:*

In order to accommodate this function, the scheduling means 25 according to this alternative embodiment forwards the data payload of the ATM cells stored in the logical buffers 26 to the SAR interface devices which function as output ports ~~18~~ 28 (as opposed to forwarding the entire ATM cell, inclusive of header, to the serial ports of the preferred embodiment). In addition, the modified scheduling means 25 sends the channel and other control information stored in the ATM cell headers (of cells associated with the logical buffers 26) separately to the SAR interface devices, in accordance with the particular interface protocols thereof.

**IN THE CLAIMS**

*Claim 1 has been amended as follows:*

1. A method of generating digital traffic for use in testing a multi-port ~~communications~~ communication device, said method comprising the steps of:

generating a reference ~~pattern defining the~~ digital traffic pattern; and

generating a plurality of traffic streams from the reference digital traffic pattern,

~~whereby~~ wherein the ~~plural~~ plurality of traffic streams are used for loading respective input ports of the ~~communications~~ communication device to mimic real digital traffic input conditions for the communication device.

*Claim 2 has been amended as follows:*

2. The method as claimed in claim 1, further including the step of introducing ~~respective~~ a plurality of phase delays ~~between said plural~~ amongst the plurality of traffic streams.

*Claim 3 has been amended as follows:*

3. The method according to claim 2, wherein the ~~communications~~ communication device effects statistical multiplexing amongst the plurality of traffic streams.

*Claim 4 has been amended as follows:*

4. The method according to claim 3, wherein the ~~plural~~ plurality of traffic streams are continuous digital data streams.

*Claim 5 has been amended as follows:*

5. The method according to claim 4, wherein the ~~plural~~ plurality of traffic streams are ATM cell streams.

*Claim 6 has been amended as follows:*

6. A method of loading a multi-port ~~communications~~ communication device with digital traffic, ~~said~~ the method comprising the steps of:

generating ~~the digital traffic; and~~ a digital traffic pattern; and

~~providing plural streams of the generated digital traffic to respective input ports of the communications device with phase delays.~~ providing a plurality of streams of the digital traffic pattern to input ports of the communication device, the plurality of streams having a plurality of phase delays therebetween.

*Claim 7 has been amended as follows:*

7. The method according to claim 6, wherein the ~~communications~~ communication device effects statistical multiplexing of the plurality of streams.

*Claim 8 has been amended as follows:*

8. A method of loading a multi-port ~~communications~~ communication device with digital traffic, said method comprising the steps of:

generating a plurality of ~~identical~~ digital traffic streams having identical data content; and

providing the ~~identical~~ plurality of digital traffic streams with a plurality of phase delays ~~to respective~~ therebetween to input ports of the ~~communications~~ communication device.

*Claim 9 has been amended as follows:*

9. The method according to claim 8, wherein the ~~communications~~ communication device effects statistical multiplexing of the plurality of digital traffic streams.

*Claim 10 has been amended as follows:*

10. A method of operating a digital traffic replicating device for use in testing a multi-port communication device, comprising the steps of:

receiving ~~a~~ an input digital traffic stream; and

generating a plurality of output digital traffic streams from the ~~received digital traffic, wherein the output streams include respective phase delays.~~ input digital traffic stream,

wherein a phase delay is introduced to at least one of the plurality of output digital traffic streams.

*Claim 11 has been amended as follows:*

11. The method according to claim 10, wherein the plurality of output digital traffic streams have traffic patterns which are replicas of the ~~received~~ input digital traffic stream.

*Claim 12 has been amended as follows:*

12. The method according to claim ~~8,~~ 11, wherein the ~~communications~~ communication device effects statistical multiplexing of the plurality of output digital traffic streams.

*Claim 13 has been amended as follows:*

13. Apparatus for generating digital traffic for use in testing a multi-port ~~communications~~ communication device, said apparatus comprising:

~~means for~~ a reference pattern generator generating a reference pattern defining ~~the~~ a digital traffic ~~; and~~ pattern; and

~~means for~~ a traffic stream replicating device generating a plurality of traffic streams from the reference pattern,

~~whereby~~ wherein the ~~plural~~ plurality of traffic streams ~~are used for loading~~ load respective input ports of the ~~communications~~ communication device to mimic real digital traffic input conditions for the communication device.

*Claim 14 has been amended as follows:*

14. The apparatus as claimed in claim ~~15~~ 13, further including means for introducing respective phase delays ~~between said plural~~ amongst the plurality of traffic streams.

*Claim 15 has been amended as follows:*

15. The apparatus according to claim 14, wherein the ~~communications~~ communication device effects statistical multiplexing of the plurality of traffic streams.

*Claim 16 has been amended as follows:*

16. The apparatus according to claim 15, wherein the ~~plural~~ plurality of traffic streams are continuous digital data streams.

*Claim 17 has been amended as follows:*

17. The apparatus according to claim 16, wherein the ~~plural~~ plurality of traffic streams are ATM cell streams.

*Claim 18 has been amended as follows:*

18. An apparatus for loading a multi-port ~~communications~~ communication device with digital traffic, ~~said~~ the apparatus comprising:

~~means for~~ a traffic generator generating ~~the~~ input digital traffic; and

means for providing ~~plural streams of the generated digital traffic to respective input ports of the communications device with phase delays.~~ a plurality of streams of the input digital traffic to input ports of the communication device, the plurality of

streams provided with phase delays therebetween to mimic real digital traffic input conditions for the communication device.

*Claim 19 has been amended as follows:*

19. The apparatus according to claim 18, wherein the ~~communications~~ communication device effects statistical multiplexing of the plurality of streams.

*Claim 20 has been amended as follows:*

20. Apparatus for loading a multi-port ~~communications~~ communication device with digital traffic, ~~said~~ the apparatus comprising:

means for generating a plurality of ~~identical~~ digital traffic streams having identical data content; and

means for providing the ~~identical streams to respective input ports of the communications device with phase delays.~~ plurality of digital traffic streams to input ports of the communication device with a phase delay introduced to at least one of the plurality of digital traffic streams to mimic real digital traffic input conditions for the communication device.

*Claim 21 has been amended as follows:*

21. The apparatus according to claim 20, wherein the ~~communications~~ communication device effects statistical multiplexing of the plurality of digital traffic streams.

*Claim 22 has been amended as follows:*

22. A digital data stream replicating device, comprising:

an input port for receiving an input continuous digital data stream comprising input data blocks at an input transmission rate;

broadcast means for replicating the input continuous digital data stream ~~N times;~~ into N streams of replicated continuous digital data streams;

N output ports for transmitting ~~each such~~ the plurality of replicated continuous digital data ~~stream through a separate output port at an~~ streams at output transmission rates, each output transmission rate at least equal to the input transmission rate; and

delay means for introducing a ~~relative~~ delay for each ~~said output~~ replicated continuous digital data stream of the plurality of replicated digital data streams with respect to the input continuous digital data stream to mimic real digital traffic input conditions for the communication device.

*Claim 23 has been amended as follows:*

23. The device according to claim 22, the device further including means for introducing idle data blocks into ~~the output~~ a replicated continuous digital data stream ~~when the~~ of the plurality of replicated continuous digital data streams for transmission through an output port of the N output ports when an output transmission rate ~~of the corresponding~~ associated with the output port is greater than the input transmission rate.

*Claim 24 has been amended as follows:*

24. The device according to claim 22, wherein the delay means comprises:

a memory ~~and~~ having N first-in first-out (FIFO) logical buffers established therein, each logical buffer being associated with ~~a separate replicated~~ one digital data stream~~, wherein~~ of the plurality of replicated continuous digital data streams,

wherein when a logical buffer of the N FIFO logical buffers is full, data blocks associated with ~~each~~ the logical buffer are forwarded to ~~the corresponding output port only when the logical buffer is full such that the relative delay encountered by the replicated cell stream corresponds to the~~ an output port of the N output ports associated the logical buffer, such that a delay provided to a digital data stream transmitted through the output port correlates to a length of the logical buffer.

*Claim 25 has been amended as follows:*

25. The device according to claim 23, wherein the delay means comprises:

a memory ~~and~~ having N first-in first-out (FIFO) logical buffers established therein, each logical buffer being associated with ~~a separate replicated~~ one digital data stream~~, wherein~~ of the plurality of replicated continuous digital data streams,

wherein when a logical buffer of the N FIFO logical buffers is full, data blocks associated with ~~each~~ the logical buffer are forwarded to ~~the corresponding~~ an output port ~~only when~~ of the N output ports associated the logical buffer ~~is full such that the relative delay encountered by the replicated~~, such that a delay provided to a digital data stream ~~corresponds to the~~ transmitted through the output port correlates to a length of the logical buffer.

*Claim 26 has been amended as follows:*

26. The device according to claim 25, wherein:

the delay means for each replicated continuous output digital data stream ~~comprises~~ forwards data blocks associated with its logical buffer at the output transmission rate of the corresponding output port~~, whereby~~; and

the ~~relative~~ delay ~~encountered by~~ provided to the replicated continuous digital data stream ~~corresponds~~ correlates to ~~the~~ a transmission rate of the corresponding output port.

*Claim 27 has been amended as follows:*

27. The device according to claim 24, wherein each of the logical buffers ~~are~~ is established by copying ~~each~~ the input data ~~block~~ blocks into ~~different~~ a physical ~~buffers~~ buffer organized in the memory, each of the logical buffers corresponding to a different physical buffer.

*Claim 28 has been amended as follows:*

28. The device according to claim 26, ~~wherein~~ each of the logical buffers ~~are~~ is established by copying ~~each~~ the input data ~~block~~ blocks into ~~different~~ a physical ~~buffers~~ buffer organized in the memory, each of the logical buffers corresponding to a different physical buffer.

*Claim 29 has been amended as follows:*

29. The device according to claim 24, wherein the logical buffers are established by copying each input data block into one physical buffer and maintaining a separate pointer to the physical buffer for each logical buffer.

*Claim 30 has been amended as follows:*

30. The device according to claim 26, wherein the logical buffers are established by copying each input data block into one physical buffer and maintaining a separate pointer to the physical buffer for each logical buffer.

*Claim 31 has been amended as follows:*

31. The device according to claim 24, wherein the input and ~~output~~ transmitted digital data streams are ATM cell streams.

*Claim 32 has been amended as follows:*

32. The device according to claim 26, wherein the input and ~~output~~ transmitted digital data streams are ATM cell streams.

*Claim 33 has been amended as follows:*

33. A digital data stream replicating device for mimicking real data traffic input patterns for a communication device, comprising:

an input port for receiving a continuous digital data stream comprising input data blocks at an input transmission rate;

a memory;

N output ports, each having an output transmission rate equal to the input transmission rate;

processing means, connected between the input port and the N output ports, for establishing N first-in first-out logical buffers in the memory and associating each

~~data block~~ of the input data blocks of the continuous digital data stream with each one of the N logical buffers, each logical buffer being associated with only one of the output ports; and

scheduling means for forwarding data blocks associated with a given logical buffer through ~~the~~ its corresponding output port when the given logical buffer is full.

*Claim 34 has been amended as follows:*

34. The device according to claim 33, wherein ~~the length of~~ each logical buffer ~~is~~ has a length selected to achieve a relative delay between the input digital data stream and ~~the corresponding replicated~~ an output digital data stream ~~generated at the~~ replicated by the logical buffer for its corresponding output port.

*Claim 35 has been amended as follows:*

35. The device according to claim 34, wherein each of the logical buffers ~~are~~ is established by copying ~~each~~ the input data ~~block~~ blocks into ~~different~~ a physical ~~buffers~~ buffer organized in the memory, each of the logical buffers corresponding to a different physical buffer.

*Claim 36 has been amended as follows:*

36. The device according to claim 34, wherein the logical buffers are established by copying each input ~~cell~~ data block into one physical buffer and maintaining a separate pointer to the physical buffer for each logical buffer.

*Claim 38 has been amended as follows:*

38. A digital data stream replicating device for mimicking real data traffic input patterns for a communication device, comprising:

an input port for receiving a continuous digital data stream comprising input data blocks at an input transmission rate;

a memory;

N output ports, each having an output transmission rate at least equal to the input transmission rate;

processing means, connected between the input port and the N output ports, for establishing N first-in first-out logical buffers in the memory and associating each of the input data ~~block~~ blocks of the ~~input~~ continuous digital data stream with each one of the N logical buffers, each logical buffer being associated with only one of the output ports; and

scheduling means for forwarding data blocks associated with a given logical buffer through its ~~the~~ corresponding output port when the given logical buffer is full.

*Claim 39 has been amended as follows:*

39. The device according to claim 38, the device further including means for introducing empty data blocks into ~~the~~ an output digital data stream replicated by the logical buffer for its corresponding output port when the output transmission rate of ~~the~~ its corresponding output port is greater than the input transmission rate.

*Claim 40 has been amended as follows:*

40. The device according to claim 39, wherein ~~the length of~~, for each logical buffer, its length and the output transmission rate of ~~the~~ its corresponding output port are selected to achieve a relative delay between the input digital data stream and ~~the corresponding replicated~~ an output digital data stream ~~generated at the~~ replicated by the logical buffer for its corresponding output port.

*Claim 41 has been amended as follows:*

41. The device according to claim 39, wherein each of the logical buffers ~~are~~ is established by copying ~~each~~ the input data ~~block~~ blocks into ~~different~~ a physical ~~buffers~~ buffer organized in the memory, each of the logical buffers corresponding to a different physical buffer.

*Claim 42 has been amended as follows:*

42. The device according to claim 39, wherein the logical buffers are established by copying each input ~~cell~~ data block into one physical buffer and maintaining a separate pointer to the physical buffer for each logical buffer.

*Claim 44 has been amended as follows:*

44. A performance testing device, comprising:

a traffic generator for generating a continuous digital data stream;

an input port for receiving the continuous digital data stream at an input transmission rate;

broadcast means for replicating the input digital data stream N times;

N output ports for transmitting each such replicated digital data stream through a separate output port at an output transmission rate at least equal to the input transmission rate; and

delay means for introducing a relative delay for each said ~~output~~ transmitted digital data stream with respect to the input digital data stream.

*Claim 45 has been amended as follows:*

45. A performance testing device, comprising:

a traffic generator for generating a continuous digital data stream;

an input port for receiving the continuous digital data stream comprising input data blocks at an input transmission rate;

a memory;

N output ports, each having an output transmission rate at least equal to the input transmission rate;

processing means, connected between the input port and the N output ports, for establishing N first-in first-out logical buffers in the memory and associating each of the input data ~~block~~ blocks of the ~~input~~ continuous digital data stream with each one of the N logical buffers, each logical buffer being associated with only one of the output ports; and

scheduling means for forwarding data blocks associated with a given logical buffer through ~~the~~ its corresponding output port when the given logical buffer is full.

*Claim 46 has been amended as follows:*

46. The device according to claim 45, the device further including means for introducing idle data blocks into ~~the~~ an output digital data stream replicated by the logical buffer for its corresponding output port when the output transmission rate of ~~the~~ its corresponding output port is greater than the input transmission rate.

**IN THE DRAWINGS**

The two sheets of drawings containing Figures 1 and 4 respectively are cancelled and replaced with the enclosed substitute sheets.

* * *

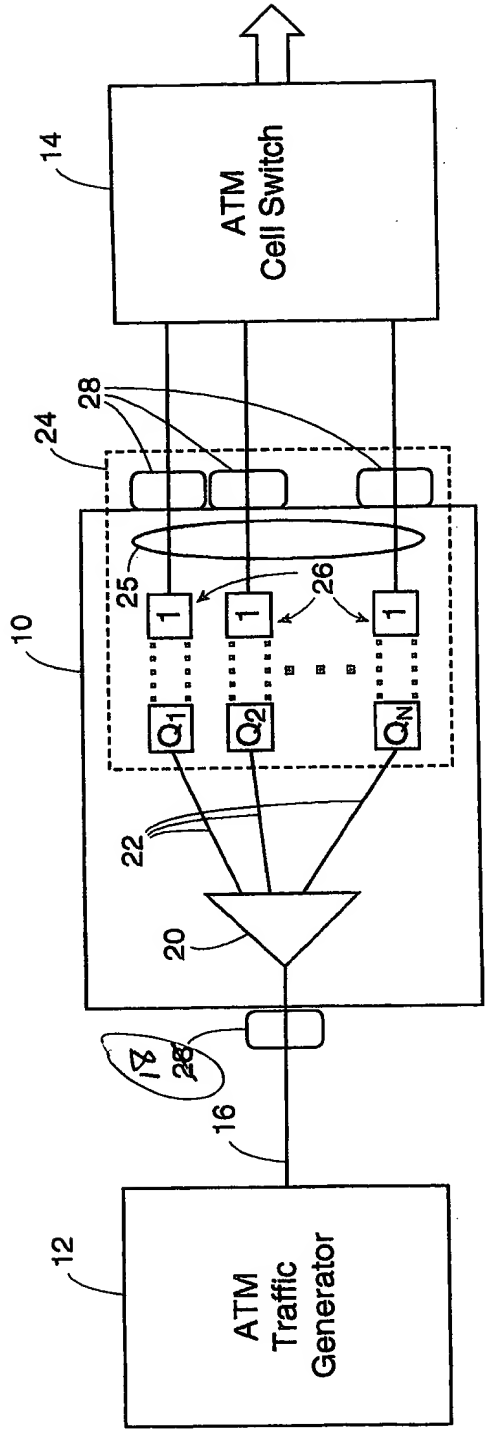


Figure 1

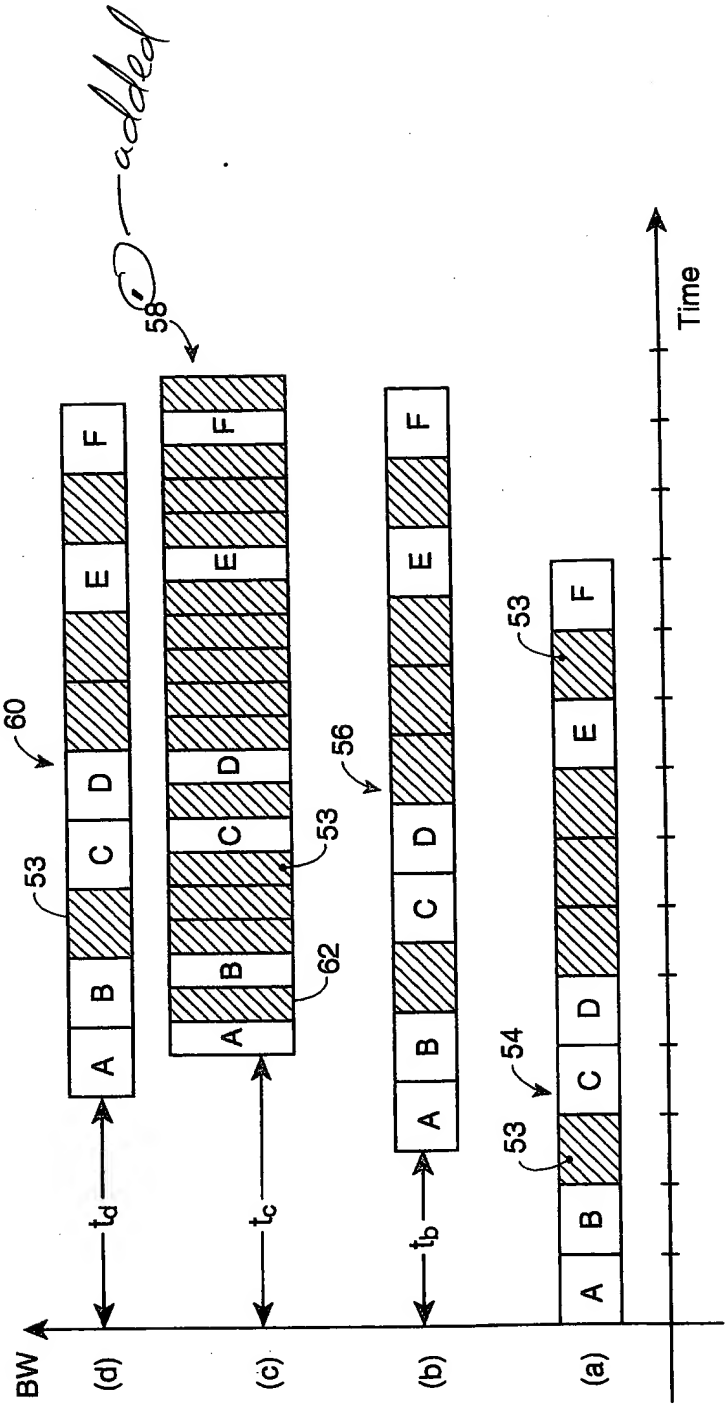


Figure 4